SEQUENCE LISTING

SEÇ	D	NO:	1													
SEÇ	UEN	CE I	LENG	TH:	436	57										
SEÇ	UEN	CE I	YPE	: n	ucle	eic	acio	d								
STR	NDE	DNES	SS:	doul	ole											
TOF	OLO	GY:	lin	ear												
SEÇ	UEN	CE I	DESC	RIP'	TION	1										
TAT	CCGC/	ACC 1	rccg(CTCC	CA CO	CCGGC	CGCCT	r cgo	GCGC	GCCC	GCC	CTCC	ATO	G CGC	CTCA	57
													Met	t Arg	g Ser	
													1			
GCG	GCC	GCA	GCT	ССТ	CGG	AGT	ccc	GCG	GTG	GCC	ACC	GAG	TCT	CGC	CGC	105
Ala	Ala	Ala	Ala	Pro	Arg	Ser	Pro	Ala	Val	Ala	Thr	Glu	Ser	Arg	Arg	
	5					10					15					
TTC	GCC	GCA	GCC	AGG	TGG	CCC	GGG	TGG	CGC	TCG	СТС	CAG	CGG	CCG	GCG	153
Phe	Ala	Ala	Ala	Arg	Trp	Pro	Gly	Trp	Arg	Ser	Leu	Gln	Arg	Pro	Ala	
20					25					30					35	
CGG	CGG	AGC	GGG	CGG	GGC	GGC	GGT	GGC	GCG	GCC	CCG	GGA	CCG	TAT	CCC	201
Arg	Arg	Ser	Gly	Arg	Gly	Gly	Gly	Gly	Ala	Ala	Pro	Gly	Pro	Tyr	Pro	
				40					45					50		
TCC	GCC	GCC	CCT	CCC	CCG	CCC	GGC	CCC	GGC	CCC	CCT	CCC	TCC	CGG	CAG	249
Ser	Ala	Ala	Pro	Pro	Pro	Pro	Gly	Pro	Gly	Pro	Pro	Pro	Ser	Arg	Gln	
			55					60					65			
AGC	TCG	CCT	CCC	TCC	GCC	TCA	GAC	TGT	TTT	GGT	AGC	AAC	GGC	AAC	GGC	297
Ser	Ser	Pro	Pro	Ser	Ala	Ser	Asp	Cys	Phe	Gly	Ser	Asn	Gly	Asn	Gly	
		70					75					80				
GGC	GGC	GCG	TTT	CGG	CCC	GGC	TCC	CGG	CGG	CTC	CTT	GGT	CTC	GGC	GGG	345

Gly Gly Ala Phe Arg Pro Gly Ser Arg Arg Leu Leu Gly Leu Gly Gly

	85					90					95					
CCT	CCC	CGC	CCC	TTC	GTC	GTC	GTC	CTT	стс	CCC	стс	GCC	AGC	CCG	GGC	393
Pro	Pro	Arg	Pro	Phe	Val	Val	Val	Leu	Leu	Pro	Leu	Ala	Ser	Pro	Gly	
100					105					110					115	
GCC	CCT	CCG	GCC	GCG	CCA	ACC	CGC	GCC	TCC	CCG	CTC	GGC	GCC	CGT	GCG	441
Ala	Pro	Pro	Ala	Ala	Pro	Thr	Arg	Ala	Ser	Pro	Leu	Gly	Ala	Arg	Ala	
				120					125					130		
TCC	CCG	CCG	CGT	TCC	GGC	GTC	TCC	TTG	GCG	CGC	CCG	GCT	ccc	GGC	TGT	489
Ser	Pro	Pro	Arg	Ser	Gly	Vaí	Ser	Leu	Ala	Arg	Pro	Ala	Pro	Gly	Cys	
			135					140					145			
CCC	CGC	CCG	GCG	TGC	GAG	CCG	GTG	TAT	GGG	CCC	стс	ACC	ATG	TCG	CTG	537
Pro	Arg	Pro	Ala	Cys	Glu	Pro	Val	Tyr	Gly	Pro	Leu	Thr	Met	Ser	Leu	
		150					155					160				
AAG	CCC	CAG	CAA	585												
Lys	Pro	GIn	Gln													
	165					170					175					
CAG	CCG	CCG	CCC	GCG	GCT	GCC	AAT	633								
Gln	Gln	GIn	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Pro	Pro	Ala	Ala	Ala	Asn	
180					185					190					195	
GTC	CGC	AAG	CCC	GGC	GGC	AGC	GGC	CTT	CTA	GCG	TCG	ccc	GCC	GCC	GCG	681
Val	Arg	Lys	Pro	Gly	Gly	Ser	Gly	Leu	Leu	Ala	Ser	Pro	Ala	Ala	Ala	
				200					205					210		
CCT	TCG	CCG	TCC	TCG	TCC	TCG	GTC	TCC	TCG	TCC	TCG	GCC	ACG	GCT	CCC	729
Pro	Ser	Pro	Ser	Ser	Ser	Ser	Val	Ser	Ser	Ser	Ser	Ala	Thr	Ala	Pro	
			215					220					225			
TCC	TCG	GTG	GTC	GCG	GCG	ACC	TCC	GGC	GGC	GGG	AGG	CCC	GGC	CTG	GGC	777
Ser	Ser	Val	Val	Ala	Ala	Thr	Ser	Gly	Gly	Gly	Arg	Pro	Gly	Leu	Gly	
		230					235					240				

AGA	GGT	CGA	AAC	AGT	AAC	AAA	GGA	CTG	CCT	CAG	TCT	ACG	ATT	TCT	TTT	825
Arg	Gly	Arg	Asn	Ser	Asn	Lys	Gly	Leu	Pro	Gln	Ser	Thr	He	Ser	Phe	
	245					250					255					
GAT	GGA	ATC	TAT	GCA	AAT	ATG	AGG	ATG	GTT	CAT	ATA	CTT	ACA	TCA	GTT	873
Asp	Gly	He	Tyr	Ala	Asn	Met	Arg	Met	Val	His	He	Leu	Thr	Ser	Val	
260					265					270					275	
GTT	GGC	TCC	AAA	TGT	GAA	GTA	CAA	GTG	AAA	AAT	GGA	GGT	ATA	TAT	GAA	921
Val	Gíy	Ser	Lys	Cys	Glu	Val	Gin	Val	Lys	Asn	Gly	Gly	He	Tyr	Glu	
				280	•				285					290		
GGA	GTT	TTT	AAA	ACT	TAC	AGT	CCG	AAG	TGT	GAT	TTG	GTA	CTT	GAT	GCC	969
Gly	Val	Phe	Lys	Thr	Tyr	Ser	Pro	Lys	Cys	Asp	Leu	Val	Leu	Asp	Ala	
			295					300					305			
GCA	CAT	GAG	AAA	AGT	ACA	GAA	TCC	AGT	TCG	GGG	CCG	AAA	CGT	GAA	GAA	1017
Ala	His	Glu	Lys	Ser	Thr	Glu	Ser	Ser	Ser	Gly	Pro	Lys	Arg	Glu	Glu	
		310					315					320				
ATA	ATG	GAG	AGT	ATT	TTG	TTC	AAA	TGT	TCA	GAC	TTT	GTT	GTG	GTA	CAG	1065
He	Met	Glu	Ser	He	Leu	Phe	Lys	Cys	Ser	Asp	Phe	Val	Val	Val	Gln	
	325					330					335					
TTT	AAA	GAT	ATG	GAC	TCC	AGT	TAT	GCA	AAA	AGA	GAT	GCT	TTT	ACT	GAC	1113
Phe	Lys	Asp	Met	Asp	Ser	Ser	Tyr	Ala	Lys	Arg	Asp	Ala	Phe	Thr	Asp	
340					345					350					355	
TCT	GCT	ATC	AGT	GCT	AAA	GTG	AAT	GGC	GAA	CAC	AAA	GAG	AAG	GAC	CTG	1161
Ser	Ala	He	Ser	Ala	Lys	Val	Asn	Gly	Glu	His	Lys	Glu	Lys	Asp	Leu	
				360					365					370		
GAG	CCC	TGG	GAT	GCA	GGT	GAA	CTC	ACA	GCC	AAT	GAG	GAA	CTT	GAG	GCT	1209
Glu	Pro	Trp	Asp	Ala	Gly	Glu	Leu	Thr	Ala	Asn	Glu	Glu	Leu	Glu	Ala	
			375					380					385			
TTG	GAA	AAT	GAC	GTA	TCT	AAT	GGA	TGG	GAT	CCC	AAT	GAT	ATG	TTT	CGA	1257

Leu	Glu	Asn	Asp	Val	Ser	Asn	Gly	Trp	Asp	Pro	Asn	Asp	Met	Phe	Arg	
		390					395					400				
TAT	AAT	GAA	GAA	AAT	TAT	GGT	GTA	GTG	TCT	ACG	TAT	GAT	AGC	AGT	TTA	1305
Tyr	Asn	Glu	Glu	Asn	Tyr	Gly	Val	Val	Ser	Thr	Tyr	Asp	Ser	Ser	Leu	
	405					410					415					
TCT	TCG	TAT	ACA	GTG	CCC	TTA	GAA	AGA	GAT	AAC	TCA	GAA	GAA	TTT	TTA	1353
Ser	Ser	Tyr	Thr	Val	Pro	Leu	Glu	Arg	Asp	Asn	Ser	Glu	Glu	Phe	Leu	
420					425					430					435	
AAA	CGG	GAA	GCA	AGG	GCA	AAC	CAG	TTA	GCA	GAA	GAA	ATT	GAG	TCA	AGT	1401
Lys	Arg	Glu	Ala	Arg	Ala	Asn	Gln	Leu	Ala	Glu	Glu	He	Glu	Ser	Ser	
				440					445					450		
GCC	CAG	TAC	AAA	GCT	CGA	GTG	GCC	CŢG	GAA	AAC	GAT	GAT	AGG	AGT	GAG	1449
Ala	Gin	Tyr	Lys	Ala	Arg	Val	Ala	Leu	Glu	Asn	Asp	Asp	Arg	Ser	Glu	
			455					460					465			
GAA	GAA	AAA	TAC	ACA	GCA	GTT	CAG	AGA	AAT	TCC	AGT	GAA	CGT	GAG	GGG	1497
Glu	Glu	Lys	Tyr	Thr	Ala	Val	Gln	Arg	Asn	Ser	Ser	Glu	Arg	Glu	Gly	
		470					475					480				
CAC	AGC	ATA	AAC	ACT	AGG	GAA	AAT	AAA	TAT	ATT	CCT	CCT	GGA	CAA	AGA	1545
His	Ser	He	Asn	Thr	Arg	Glu	Asn	Lys	Tyr	He	Pro	Pro	Gly	Gln	Arg	
	485					490					495					
AAT	AGA	GAA	GTC	ATA	TCC	TGG	GGA	AGT	GGG	AGA	CAG	AAT	TCA	CCG	CGT	1593
Asn	Arg	Glu	Val	He	Ser	Trp	Gly	Ser	Gly	Arg	Gln	Asn	Ser	Pro	Arg	
500					505					510					515	
ATG	GGC	CAG	CCT	GGA	TCG	GGC	TCC	ATG	CCA	TCA	AGA	TCC	ACT	TCT	CAC	1641
Met	Gly	Gin	Pro	Gly	Ser	Gly	Ser	Met	Pro	Ser	Arg	Ser	Thr	Ser	His	
				520					525					530		
ACT	TCA	GAT	TTC	AAC	CCG	TAA	TCT	GGT	TCA	GAC	CAA	AGA	GTA	GTT	AAT	1689
Thr	Ser	Asp	Phe	Asn	Pro	Asn	Ser	Gly	Ser	Asp	Gln	Arg	Val	Val	Asn	

			535					540					545			
GGA	GGT	GTT	CCC	TGG	CCA	TCG	CCT	TGC	CCA	TCT	CCT	TCC	тст	CGC	CCA	1737
Gly	Gly	Val	Pro	Trp	Pro	Ser	Pro	Cys	Pro	Ser	Pro	Ser	Ser	Arg	Pro	
		550					555					560				
CCT	тст	CGC	TAC	CAG	TCA	GGT	ccc	AAC	тст	CTT	CCA	CCT	CGG	GCA	GCC	1785
Pro	Ser	Arg	Tyr	Gln	Ser	Gly	Pro	Asn	Ser	Leu	Pro	Pro	Arg	Ala	Ala	
	565					570					575					
ACC	CCT	ACA	CGG	CCG	CCC	TCC	AGG	CCC	CCC	TCG	CGG	CCA	TCC	AGA	CCC	1833
Thr	Pro	Thr	Arg	Pro	Pro	Ser	Arg	Pro	Pro	Ser	Arg	Pro	Ser	Arg	Pro	
580					585					590					595	
CCG	TCT	CAC	CCC	TCT	GCT	CAT	GGT	TCT	CCA	GCT	CCT	GTC	TCT	ACT	ATG	1881
Pro	Ser	His	Pro	Ser	Ala	His	Gly	Ser	Pro	Ala	Pro	Val	Ser	Thr	Met	
				600					605					610		
CCT	AAA	CGC	ATG	TCT	TCA	GAA	GGG	CCT	CCA	AGG	ATG	TCC	CCA	AAG	GCC	1929
Pro	Lys	Arg	Met	Ser	Ser	Glu	Gly	Pro	Pro	Arg	Met	Ser	Pro	Lys	Ala	
			615					620					625			
CAG	CGA	CAT	CCT	CGA	AAT	CAC	AGA	GTT	TCT	GCT	GGG	AGG	GGT	TCC	ATA	1977
Gln	Arg	His	Pro	Arg	Asn	His	Arg	Val	Ser	Ala	Gly	Arg	Gly	Ser	He	
		630					635					640				
TCC	AGT	GGC	CTA	GAA	TTT	GTA	TCC	CAC	AAC	CCA	CCC	AGT	GAA	GCA	GCT	2025
Ser	Ser	Gly	Leu	Glu	Phe	Val	Ser	His	Asn	Pro	Pro	Ser	Glu	Ala	Ala	
	645					650					655					
ACT	CCT	CCA	GTA	GCA	AGG	ACC	AGT	CCC	TCG	GGG	GGA	ACG	TGG	TCA	TCA	2073
Thr	Pro	Pro	Val	Ala	Arg	Thr	Ser	Pro	Ser	Gly	Gly	Thr	Trp	Ser	Ser	
660					665					670					675	
GTG	GTC	AGT	GGG	GTT	CCA	AGA	ATT	TCC	CCT	AAA	ACT	CAT	AGA	CCC	AGG	2121
Val	Val	Ser	Gly	Val	Pro	Arg	Leu	Ser	Pro	Lys	Thr	His	Arg	Pro	Arg	
				680					685					690		

TCT	CCC	AGA	CAG	AAC	AGT	ATT	GGA	AAT	ACC	CCC	AGT	GGG	CCA	GTT	CTT	2169
Ser	Pro	Arg	Gln	Asn	Ser	He	Gly	Asn	Thr	Pro	Ser	Gly	Pro	Val	Leu	
			695					700					705			
GCT	TCT	CCC	CĄA	GCT	GGT	ATT	ATT	CCA	ACT	GAA	GCT	GTT	GCC	ATG	CCT	2217
Ala	Ser	Pro	Gln	Ala	Gly	lle	Пе	Pro	Thr	Glu	Ala	Val	Ala	Met	Pro	
		710					715					720				
ATT	CCA	GCT	GCA	TCT	CCT	ACG	CCT	GCT	AGT	CCT	GCA	TCG	AAC	AGA	GCT	2265
He	Pro	Ala	Ala	Ser	Pro	Thr	Pro	Ala	Ser	Pro	Ala	Ser	Asn	Arg	Ala	
	725					730					735					
GTT	ACC	CCT	TCT	AGT	GAG	GCT	AAA	GAT	TCC	AGG	CTT	CAA	GAT	CAG	AGG	2313
Val	Thr	Pro	Ser	Ser	Glu	Ala	Lys	Asp	Ser	Arg	Leu	Gln	Asp	Gln	Arg	
740					745					750					755	
CAG	AAC	TCT	CCT	GCA	GGG	AAT	AAA	GAA	AAT	ATT	AAA	CCC	AAT	GAA	ACA	2361
Gln	Asn	Ser	Pro	Ala	Gly	Asn	Lys	Glu	Asn	lle	Lys	Pro	Asn	Glu	Thr	
				760					765					770		
TCA	CCT	AGC	TTC	TCA	AAA	GCT	GAA	AAC	AAA	GGT	ATA	TCA	CCA	GTT	GTT	2409
Ser	Pro	Ser	Phe	Ser	Lys	Ala	Glu	Asn	Lys	Gly	He	Ser	Pro	Val	Val	
			775					780					785			
TCT	GAA	CAT	AGA	AAA	CAG	ATT	GAT	GAT	TTA	AAG	AAA	TTT	AAG	AAT	GAT	2457
Ser	Glu	His	Arg	Lys	GIn	He	Asp	Asp	Leu	Lys	Lys	Phe	Lys	Asn	Asp	
		790					795					800				
TTT	AGG	TTA	ÇAG	CCA	AGT	TCT	ACT	TCT	GAA	TCT	ATG	GAT	CAA	CTA	CTA	2505
Phe	Arg	Leu	Gln	Pro	Ser	Ser	Thr	Ser	Glu	Ser	Met	Asp	Gln	Leu	Leu	
	805					810					815					
AAC	AAA	AAT	AGA	GAG	GGA	GAA	AAA	TCA	AGA	GAT	TTG	ATC	AAA	GAC	AAA	2553
Asn	Lys	Asn	Arg	Glu	Gly	Glu	Lys	Ser	Arg	Asp	Leu	He	Lys	Asp	Lys	
820					825					830					835	
ATT	GAA	CCA	AGT	GCT	AAG	GAT	TCT	TTC	ATT	GAA	AAT	AGC	AGC	AGC	AAC	2601

He	Glu	Pro	Ser	Ala	Lys	Asp	Ser	Phe	He	Glu	Asn	Ser	Ser	Ser	Asn	
				840					845					850		
TGT	ACC	AGT	GGC	AGC	AGC	AAG	CCG	AAT	AGC	CCC	AGC	ATT	TCC	CCT	TCA	2649
Cys	Thr	Ser	Gly	Ser	Ser	Lys	Pro	Asn	Ser	Pro	Ser	lle	Ser	Pro	Ser	
			855					860					865			
ATA	CTT	AGT	AAC	ACG	GAG	CAC	AAG	AGG	GGA	CCT	GAG	GTC	ACT	TCC	CAA	2697
He	Leu	Ser	Asn	Thr	Glu	His	Lys	Arg	Gly	Pro	Glu	Val	Thr	Ser	Gln	
		870					875					880				
GGG	GTT	CAG	ACT	TCC	AGC	CCA	GCA	TGT	AAA	CAA	GAG	AAA	GAC	GAT	AAG	2745
Gly	Val	Gln	Thr	Ser	Ser	Pro	Ala	Cys	Lys	GIn	Glu	Lys	Asp	Asp	Lys	
	885					890					895					
GAA	GAG	AAG	AAA	GAC	GCA	GCT	GAG	CAA	GTT	AGG	AAA	TCA	ACA	TTG	AAT	2793
Glu	Glu	Lys	Lys	Asp	Ala	Ala	Glu	Gln	Val	Arg	Lys	Ser	Thr	Leu	Asn	
900					905					910					915	
CCC	AAT	GCA	AAG	GAG	TTC	AAC	CCA	CGT	TCC	TTC	TCT	CAG	CCA	AAG	CCT	2841
Pro	Asn	Ala	Lys	Glu	Phe	Asn	Pro	Arg	Ser	Phe	Ser	Gln	Pro	Lys	Pro	
				920					925					930		
TCT	ACT	ACC	CCA	ACT	TCA	CCT	CGG	CCT	CAA	GCA	CAA	ССТ	AGC	CCA	TCT	2889
Ser	Thr	Thr	Pro	Thr	Ser	Pro	Arg	Pro	GIn	Ala	GIn	Pro	Ser	Pro	Ser	
			935					940					945			
ATG	GTG	GGT	CAT	CAA	CAG	CCA	ACT	CCA	GTT	TAT	ACT	CAG	CCT	GTT	TGT	2937
Met	Val	Gly	His	Gln	Gln	Pro	Thr	Pro	Val	Tyr	Thr	Gln	Pro	Val	Cys	
		950					955					960				
TTT	GCA	CCA	AAT	ATG	ATG	TAT	CCA	GTC	CCA	GTG	AGC	CCA	GGC	GTG	CAA	2985
Phe	Ala	Pro	Asn	Met	Met	Tyr	Pro	Val	Pro	Val	Ser	Pro	Gly	Val	Gln	
	965					970					975					
	TTA															3033
Dra	Lau	Tur	Dra	ماا	Dra	Mot	Thr	Dra	Mat	Dra	Val	Acn	Gln	Δla	Lve	

980					985					990					995	
ACA	TAT	AGA	GCA	GTA	CCA	AAT	ATG	ccc	CAA	CAG	CGG	CAA	GAC	CAG	CAT	3081
Thr	Tyr	Arg	Ala	Val	Pro	Asn	Met	Pro	Gln	Gln	Arg	Gln	Asp	Gln	His	
				1000)				1005	5				1010)	
CAT	CAG	AGT	GCC	ATG	ATG	CAC	CCA	GCG	TCA	GCA	GCG	GGC	CCA	CCG	ATT	3129
His	Gln	Ser	Ala	Met	Met	His	Pro	Ala	Ser	Ala	Ala	Gly	Pro	Pro	lle	
			1015	5				1020)				1025	5		
GCA	GCC	ACC	CCA	CCA	GCT	TAC	TCC	ACG	CAA	TAT	GTT	GCC	TAC	AGT	CCT	3177
Ala	Ala	Thr	Pro	Pro	Ala	Tyr	Ser	Thr	Gln	Tyr	Val	Ala	Tyr	Ser	Pro	
		1030)				1035	õ				1040)			
CAG	CAG	TTC	CCA	AAT	CAG	CCC	CTT	GTT	CAG	CAT	GTG	CCA	CAT	TAT	CAG	3225
Gln	Gln	Phe	Pro	Asn	Gln	Pro	Leu	Val	Gln	His	Val	Pro	His	Tyr	Gln	
	1045	5				1050) , '				1055	5				
TCT	CAG	CAT	CCT	CAT	GTC	TAT	AGT	CCT	GTA	ATA	CAG	GGT	AAT	GCT	AGA	3273
Ser	Gln	His	Pro		Val	Tyr	Ser	Pro			Gln	Gly	Asn	Ala		
Ser 1060		His	Pro		Va I 1065		Ser	Pro				Gly	Asn	Ala		
1060)			His		5			Val	lle 1070)			1 *	Arg 1075	3321
1060 ATG) ATG	GCA	CCA	His CCA	1065	CAC	GCC	CAG	Val CCT	lle 1070 GGT) TTA	GTA	тст	TCT	Arg 1075 TCA	3321
1060 ATG) ATG	GCA	CCA	His CCA	1065 ACA Thr	CAC	GCC	CAG	Val CCT	lle 1070 GGT Gly) TTA	GTA	тст	TCT	Arg 1075 TCA Ser	3321
1060 ATG Met) ATG Met	GCA Ala	CCA Pro	CCA Pro	1065 ACA Thr	CAC His	GCC	CAG GIn	Val CCT Pro 1088	lle 1070 GGT Gly) TTA Leu	GTA Val	TCT Ser	TCT Ser 1090	Arg 1075 TCA Ser	3321 3369
1060 ATG Met	ATG Met	GCA Ala CAG	CCA Pro	CCA Pro 1080 GGG	1065 ACA Thr	CAC His	GCC Ala GAG	CAG GIn CAG	Val CCT Pro 1088	Ile 1070 GGT Gly CAT	TTA Leu GCG	GTA Val ATG	TCT Ser TAT	TCT Ser 1090 GCA	Arg 1075 TCA Ser)	
1060 ATG Met	ATG Met	GCA Ala CAG	CCA Pro	CCA Pro 1080 GGG GIy	1065 ACA Thr O	CAC His	GCC Ala GAG	CAG GIn CAG	Val CCT Pro 1088 ACG Thr	Ile 1070 GGT Gly CAT	TTA Leu GCG	GTA Val ATG	TCT Ser TAT	TCT Ser 1090 GCA Ala	Arg 1075 TCA Ser)	
1060 ATG Met GCA Ala	ATG Met ACT Thr	GCA Ala CAG Gln	CCA Pro TAC Tyr 1095	CCA Pro 1080 GGG Gly	1065 ACA Thr O	CAC His CAT His	GCC Ala GAG Glu	CAG GIn CAG GIn	Val CCT Pro 1088 ACG Thr	Ile 1070 GGT Gly CAT His	TTA Leu GCG Ala	GTA Val ATG Met	TCT Ser TAT Tyr 1105	TCT Ser 1090 GCA Ala	Arg 1075 TCA Ser) TGT Cys	
1060 ATG Met GCA Ala	ATG Met ACT Thr	GCA Ala CAG Gln	CCA Pro TAC Tyr 1095 CCA	CCA Pro 1080 GGG GIY	1065 ACA Thr) GCT Ala	CAC His CAT His	GCC Ala GAG Glu GAG	CAG GIn CAG GIn 1100	Val CCT Pro 1089 ACG Thr	Ile 1070 GGT Gly CAT His	TTA Leu GCG Ala	GTA Val ATG Met	TCT Ser TAT Tyr 1108 TAC	TCT Ser 1090 GCA Ala	Arg 1075 TCA Ser) TGT Cys	3369
1060 ATG Met GCA Ala	ATG Met ACT Thr	GCA Ala CAG Gln	CCA Pro TAC Tyr 1095 CCA Pro	CCA Pro 1080 GGG GIY	1065 ACA Thr O GCT Ala	CAC His CAT His	GCC Ala GAG Glu GAG	CAG GIn CAG GIn 1100 ACA Thr	Val CCT Pro 1089 ACG Thr	Ile 1070 GGT Gly CAT His	TTA Leu GCG Ala	GTA Val ATG Met	TCT Ser TAT Tyr 1108 TAC Tyr	TCT Ser 1090 GCA Ala	Arg 1075 TCA Ser) TGT Cys	3369
1060 ATG Met GCA Ala CCC Pro	ATG Met ACT Thr AAA Lys	GCA Ala CAG GIn TTA Leu 1110	CCA Pro TAC Tyr 1095 CCA Pro	CCA Pro 1080 GGG GIY TAC	1065 ACA Thr O GCT Ala	CAC His CAT His AAG Lys	GCC Ala GAG Glu GAG Glu	CAG GIn 1100 ACA Thr	Val CCT Pro 1085 ACG Thr AGC Ser	Ile 1070 GGT Gly CAT His	TTA Leu GCG Ala TCT Ser	GTA Val ATG Met TTC Phe 1120	TCT Ser TAT Tyr 1108 TAC Tyr	TCT Ser 1090 GCA Ala TTT Phe	Arg 1075 TCA Ser TGT Cys GCC Ala	3369
1060 ATG Met GCA Ala CCC Pro	ATG Met ACT Thr AAA Lys	GCA Ala CAG GIn TTA Leu 1110 ACG	CCA Pro TAC Tyr 1095 CCA Pro GGC	CCA Pro 1080 GGG GIY TAC Tyr	1065 ACA Thr O GCT Ala AAC Asn	CAC His CAT His AAG Lys	GCC Ala GAG Glu GAG Glu 1118 CAG	CAG GIn 1100 ACA Thr CAG	CCT Pro 1088 ACG Thr AGC Ser	Ile 1070 GGT Gly CAT His CCT Pro	TTA Leu GCG Ala TCT Ser	GTA Val ATG Met TTC Phe 1120	TCT Ser TAT Tyr 1105 TAC Tyr O	TCT Ser 1090 GCA Ala TTT Phe	Arg 1075 TCA Ser TGT Cys GCC Ala	3369 3417

CTG	CAC	CCA	CAT	ACT	CCA	CAC	ССТ	CAG	CCT	TCA	GCT	ACC	CCC	ACT	GGA	3513
Leu	His	Pro	His	Thr	Pro	His	Pro	Gln	Pro	Ser	Ala	Thr	Pro	Thr	Gly	
1140)				1145	5 .				1150)				1155	
CAG	CAG	CAA	AGC	CAA	CAT	GGT	GGA	AGT	CAT	CCT	GCA	CCC	AGT	CCT	GTT	3561
GIn	Gln	Gln	Ser	Gln	His	Gly	Gly	Ser	His	Pro	Ala	Pro	Ser	Pro	Val	
				1160)				116	5				1170	ס	
CAG	CAC	CAT	CAG	CAC	CAG	GCC	GCC	CAG	GCT	стс	CAT	CTG	GCC	AGT	CCA	3609
GIn	His	His	Gln	His	GIn	Ala	Ala	Gln	Ala	Leu	His	Leu	Ala	Ser	Pro	
			1175	5				1180)				1185	ō		
CAG	CAG	CAG	TCA	GCC	ATT	TAC	CAC	GCG	GGG	CTT	GCG	CCA	ACT	CCA	CCC	3657
GIn	GIn	Gln	Ser	Ala	He	Tyr	His	Ala	Gly	Leu	Ala	Pro	Thr	Pro	Pro	
		1190)				1195	5				1200)			
TCC	ATG	ACA	CCT	GCC	TCC	AAC	ACG	CAG	TCG	CCA	CAG	AAT	AGT	TTC	CCA	3705
Ser	Met	Thr	Pro	Ala	Ser	Asn	Thr	Gln	Ser	Pro	Gin	Asn	Ser	Phe	Pro	
	1205	5				1210)				1215	5				
GCA	GCA	CAA	CAG	ACT	GTC	TTT	ACG	ATC	CAT	CCT	TCT	CAC	GTT	CAG	CCG	3753
Ala	Ala	Gln	GIn	Thr	Val	Phe	Thr	He	His	Pro	Ser	His	Val	Gln	Pro	
1220)				1225	5				1230)				1235	
GCG	TAT	ACC	AAC	CCA	CCC	CAC	ATG	GCC	CAC	GTA	CCT	CAG	GCT	CAT	GTA	3801
Ala	Tyr	Thr	Asn	Pro	Pro	His	Met	Ala	His	Val	Pro	Gln	Ala	His	Val	
				1240)				1245	5				1250)	
CAG	TCA	GGA	ATG	GTT	CCT	TCT	CAT	CCA	ACT	GCC	CAT	GCG	CCA	ATG	ATG	3849
Gln	Ser	Gly	Met	Val	Pro	Ser	His	Pro	Thr	Ala	His	Ala	Pro	Met	Met	
			1255	5				1260)				1265	5		
CTA	ATG	ACG	ACA	CAG	CCA	CCC	GGC	GGT	CCC	CAG	GCC	GCC	CTC	GCT	CAA	3897
Leu	Met	Thr	Thr	Gln	Pro	Pro	Gly	Gly	Pro	Gin	Ala	Ala	Leu	Ala	Gln	
		1270)				127	5				1280)			
AGT	GCA	CTA	CAG	CCC	ATT	CCA	GTC	TCG	ACA	ACA	GCG	CAT	TTC	CCC	TAT	3945

Ser Ala Leu Gln Pro lle Pro Val Ser Thr Thr Ala His Phe Pro Tyr 1285 1290 1295

ATG ACG CAC CCT TCA GTA CAA GCC CAC CAC CAA CAG CAG TTG

3987

Met Thr His Pro Ser Val Gln Ala His His Gln Gln Gln Leu

1300

1305

1310

TAAGGCTGCC CTGGAGGAAC CGAAAGGCCA AATTCCCTCC TCCCTTCTAC TGCTTCTACC 4047

AACTGGAAGC ACAGAAAACT AGAATTCAT TTATTTTGTT TTTAAAATAT ATATGTTGAT 4107

TTCTTGTAAC ATCCAATAGG AATGCTAACA GTTCACTTGC AGTGGAAGAT ACTTGGACCG 4167

AGTAGAGGCA TTTAGGAACT TGGGGGCTAT TCCATAATTC CATATGCTGT TTCAGAGTCC 4227

CGCAGGTACC CCAGCTCTGC TTGCCGAAAC TGGAAGTTAT TTATTTTTTA ATAACCCTTG 4287

AAAGTCATGA ACACATCAGC TAGCAAAAGA AGTAACAAGA GTGATTCTTG CTGCTATTAC 4347

TGCTAAAAAA AAAAAAAAA

SEQ ID NO: 2

SEQUENCE LENGTH: 203

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CACCACCAGC AACAGCAACA GCAGCAGCAG CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG 60
CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG 120
CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG 180
CAGCATCACG GAAACTCTGG GCC 203

SEQ ID NO: 3

SEQUENCE LENGTH: 20

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CACCACCAGC AACAGCAACA

20

SEQ ID NO: 4

SEQUENCE LENGTH: 20

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

GGCCCAGAGT TTCCGTGATG

20

SEQ ID NO: 5

SEQUENCE LENGTH: 165

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG 60

CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG 120

CAGCAGCAGC AGCAGCAGCA GCAGCAGCAG CAGCAGCAGC AGCAG 165

SEQ ID NO: 6

SEQUENCE LENGTH: 21

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CCCTCACCAT GTCGCTGAAG C

21

SEQ ID NO: 7

SEQUENCE LENGTH: 19

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CGACGCTAGA AGGCCGCTG

19

SEQ ID NO: 8

SEQUENCE LENGTH: 19

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

CTTGCGGACA TTGGCAGCC

19

SEQ ID NO: 9

SEQUENCE LENGTH: 27

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

TTCTCTCAGC CAAAGCCTTC TACTACC

27

SEQ ID NO: 10

SEQUENCE LENGTH: 19

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

TATCCGCAGC TCCGCTCCC

SEQ ID NO: 11

SEQUENCE LENGTH: 20

SEQUENCE TYPE: nucleic acid

STRNDEDNESS: single

TOPOLOGY: linear

SEQUENCE DESCRIPTION

AGCCGGGCCG AAACGCGCCG

20

19